

## CLAIMS

1. An AC/DC or DC/DC adapter, comprising circuitry to generate a signal proportional to the maximum adapter current.
2. An AC/DC or DC/DC adapter as claimed in claim 1, said circuitry comprising a current limit encoder generating said signal proportional to the maximum adapter current.
3. An AC/DC or DC/DC adapter as claimed in claim 1, said circuitry comprising an identification resistor coupled to the positive adapter voltage.
4. An AC/DC or DC/DC adapter as claimed in claim 1, said circuitry comprising an identification resistor coupled to the negative adapter voltage.
5. An AC/DC or DC/DC adapter as claimed in claim 1, said circuitry comprising a current sense resistor coupled to the positive adapter voltage and a current sense comparator coupled to said current sense resistor, said current sense comparator having a set upper gain and generating a normalized value of said signal proportional to the maximum adapter current.
6. An adapter topology system, comprising  
an AC/DC or DC/DC adapter comprising circuitry to generate a signal proportional to the maximum adapter current; and  
a portable electronic device adapted to receive power from said adapter and to receive said signal proportional to the maximum adapter current.
7. An adapter topology system as claimed in claim 6, said circuitry comprising a current limit encoder generating said signal proportional to the maximum adapter current; said portable electronic device comprising a current limit decoder receiving said signal

proportional to the maximum adapter current and generating a voltage proportional to the rated current of said adapter.

8. An adapter topology system as claimed in claim 6, said current limit decoder comprising a keyboard controller, said keyboard controller generating SMBus commands to a digital to analog circuit to generate said voltage proportional to the rated current of said adapter.

9. An adapter topology system as claimed in claim 6, said circuitry comprising an identification resistor coupled to the positive adapter voltage; said portable electronic device comprising a reference resistor coupled between said identification resistor and ground thereby forming a voltage divider generating said voltage proportional to the rated current of said adapter.

10. An adapter topology system as claimed in claim 6, said circuitry comprising an identification resistor coupled to the negative adapter voltage; said portable electronic device comprising a reference resistor coupled between said identification resistor and a reference voltage thereby forming a voltage divider generating said voltage proportional to the rated current of said adapter.

11. An adapter topology system as claimed in claim 6, said circuitry comprising a current sense resistor coupled to the positive adapter voltage and a current sense comparator coupled to said current sense resistor, said current sense comparator having a set upper gain and generating a normalized value of said signal proportional to the maximum adapter current; said portable electronic device comprising a resistor coupled between said signal proportional to the maximum adapter current and ground thereby

generating a voltage representing the percentage that the actual current is with respect to the maximum current.

12. An adapter topology system as claimed in claim 6, said current limit decoder comprising a keyboard controller, said keyboard controller generating SMBus commands to a multiplexed digital to analog converter through an SMBus programmable interface, said multiplexed digital to analog converter generating said signal proportional to the maximum adapter current.

13. A portable electronic device, comprising circuitry to receive a signal proportional to the maximum current supplied to said portable electronic device and a charger controller.

14. A portable electronic device as claimed in claim 13, said circuitry comprising a current limit decoder receiving a coded signal indicative of said signal proportional to the maximum current supplied to said portable electronic device and generating a voltage proportional to the rated current of an AC/DC or DC/DC adapter supplying power to said portable electronic device.

15. A portable electronic device as claimed in claim 14, said current limit decoder comprising a keyboard controller, said keyboard controller generating SMBus commands to a digital to analog circuit to generate said voltage proportional to the rated current of said adapter.

16. A portable electronic device as claimed in claim 13, said circuitry comprising a reference resistor coupled between said signal proportional to the maximum adapter current and ground generating said voltage proportional to the rated current of an AC/DC or DC/DC adapter supplying power to said portable electronic device.

1 17. A portable electronic device as claimed in claim 13, said circuitry comprising a  
2 reference resistor coupled between said signal proportional to the maximum current  
3 supplied to said portable electronic device and a reference voltage, and generating a  
4 voltage proportional to the rated current of an AC/DC or DC/DC adapter supplying  
5 power to said portable electronic device.

6 18. A portable electronic device as claimed in claim 13, said signal proportional to the  
7 maximum current supplied to said portable electronic comprising normalized signal; said  
8 circuitry comprising a resistor coupled between said normalized signal and ground  
9 thereby generating a voltage representing the percentage that the actual current supplied  
10 to said portable electronic device is with respect to the maximum current.

11 19. A portable electronic device as claimed in claim 14, said current limit decoder  
12 comprising a keyboard controller, said keyboard controller generating SMBus commands  
13 to a multiplexed digital to analog converter through an SMBus programmable interface,  
14 said multiplexed digital to analog converter generating said signal proportional to the  
15 maximum current supplied to said portable electronic device.